

Uniting for a Common Purpose

Unincorporated Community Comes Together to Protect Groundwater Groundwater Guardian Featured Result Oriented Activity

by Becky Vandenberg, Emerald Groundwater Guardian Team

Emerald is a small, unincorporated community just west of Lincoln, Nebraska. In 1973, a Sanitary Improvement District (SID) was formed to provide a community sewer system and became SID #6 Emerald, NE. In 1989, testing done by the Lincoln Lancaster County Health Department (LLCHD) found individual wells throughout the community to be compromised by surface water contaminated with pesticides and cleaning agents. Two years later, community wells were installed and testing indicated nitrate levels between 6.2 and 7.3 parts per million. In 2001, nitrate levels exceeded the maximum contaminant level of 10 parts per million, leaving the community with the challenge of locating a new site for a water source and starting all over.

Changes had to be made. People had to be made aware of the consequences of their actions. Many residents simply didn't realize the contamination risks to groundwater when items such as old appliances, antifreeze, motor oil, and batteries are left to sit over an extended period of time or chemicals are poured on the ground. It wasn't until their own water came into question that action was finally spurred.

Hoping to avoid another expensive band-aid, we had to become actively involved in the education of the general public, not just the people contained within the boundaries of the SID, a system with only 25 service sites, but the surrounding area as well. We became associated with The Groundwater Foundation through their "Field Staff for Groundwater Protection" project,

providing us with various assistance, and began to work towards becoming a Groundwater Guardian Community.

Community Education

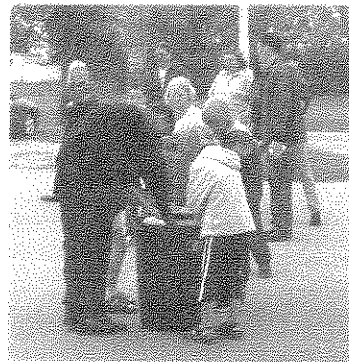
Our first course of action was to delineate a Wellhead Protection Area, approved by the Nebraska Department of Environmental Quality (NDEQ). We began to work with area landowners regarding the use of fertilizer flow meters, decommissioning abandoned wells, metering water usage, the careful disposal of hazardous waste, and regular drinking water well monitoring.

The Nebraska Environmental Trust provided a grant to LLCHD to work with local Future Farmers of America (FFA) students to bring free nitrate testing to individual well owners. Thanks to this program, we were able to sponsor several "Test Your Well" nights to monitor nitrate levels. This service is invaluable to community residents, as many would not test their water at all if it were not presented in this way. We actually built a "following" if you will, of people returning each time to keep track of nitrate levels in their well. One woman recently brought in her granddaughter and a water sample to be tested to be sure it was safe to make a bottle. Before we began this project, she was unaware of the need to monitor well water.

Our first Groundwater Festival was held in May of 2003 for two one-room schoolhouses, with nineteen students and two teachers. Through hands-on games and projects, they learned about water scarcity, how the water cycle works, how surface

► Emerald's clean up project collected 100 tons of scrap tire.

▼ Students from two one-room schools participate in festival activities.



water can contaminate groundwater, and the need to recycle or properly dispose of potential contaminants. Everything students learned that day went home to siblings, parents, and grandparents, hopefully with enough emphasis to institute change. The event was a fun success, and we have been contacted by a church and another small Lincoln school that would like to be involved, adding more students to the 2004 festivities.

Pollution Prevention

We also began work on a clean-up project for Emerald and the area. Funding was requested from NDEQ to include a scrap tire collection in our clean-up. Not only did we receive funding, but it was the only grant awarded in Lancaster County and the largest per capita in the state! About the same time, LLCHD approached

Emerald regarding a household hazardous waste collection in our area.

We wanted to collect as many items as possible without costing us a mint, so we searched for groups to take items off our hands within our price range of "very close to free." We were able to find area groups to remove scrap tires (which will be made into picnic tables and park benches), used motor oil, appliances, and used batteries.

In a six hour time span, we collected 440 gallons of used motor oil, nearly two semi trailers full of used appliances, 196 batteries, and 100 tons of scrap tires and actually made \$38 in the process!

Had we been paid a million dollars to put this all together, we would not have achieved the gratification felt from witnessing the community's participation. Everyone in a two to three mile radius took advantage of what we were offering. Before we began working as a Groundwater Guardian Community, the only communal thing we had was paying our water bill to the same person. Now thanks to Groundwater Guardian, everything we do revolves around the preservation of our groundwater. *